

therapy and the monotherapy. However, when the unobserved selectivity was also adjusted using the switching regression model, the combined therapy was less expensive (at 90% CI) in both the treated population (TT) and the general population (ATE). The TT was even less than ATE and the marginal savings would be \$3150 annually. **CONCLUSIONS:** Given the combined therapy's clinical benefit shown in previous studies, it is the dominant long-term asthma-control therapy in the studied population. The difference in ATE and TT indicates that the combined therapy was given to patients whose health status could be improved the most by it.

**PRP14****RATES OF ASTHMA-RELATED MEDICAL AND PRESCRIPTION RESOURCE UTILIZATION AND COSTS IN A MEDICAID POPULATION**

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**OBJECTIVES:** To assess the utilization and costs for medical resources and pharmacotherapy among patients with asthma in a state Medicaid population. **METHODS:** Outpatient, hospital and emergency department (ED) claims with a primary ICD-9 code for asthma (493.XX) dated between January 1 through December 31, 1999 were extracted from a state Medicaid claims database. Unique recipient identifiers obtained from these claims were then used to extract asthma-related prescription claims. Medicaid reimbursements were used to calculate costs for outpatient, ED and prescription drug use, and 1999 Medicare DRG reimbursement amounts provided by the Centers for Medicare and Medicaid Services (CMS) were used to calculate hospital costs. Based on the pharmacotherapy received, recipients were classified into one of four categories: 1) short-acting beta-agonist use only; 2) use of combination therapy without inhaled anti-inflammatory medications; 3) use of any inhaled anti-inflammatory therapy (inhaled corticosteroids, cromolyn, or nedocromil); or 4) no prescription claims for asthma-related medications. **RESULTS:** Overall asthma prevalence was 17.7/1000 Medicaid recipients. Of the 6051 recipients identified with asthma, 20.4% (n = 1233) received short-acting beta-agonist therapy only, 34.8% (n = 2108) received combination therapy without inhaled anti-inflammatory drugs, 35.9% (n = 2170) received at least one inhaled anti-inflammatory drug, and 8.9% (n = 540) had no prescription claims for asthma-related medications. The hospitalization rate was 21 hospitalizations/10,000 recipients at a mean cost of \$3737 (SD = \$1322) per visit per recipient (pvpr). The rates of outpatient and ED use were 21 outpatient visits/1000 recipients, and 69 ED visits/10,000 recipients. The mean cost pvpr for outpatient and ED use was \$54 (SD = \$72) and \$101 (SD = \$126), respectively. The total asthma-related expenditures to Medicaid were: \$2,690,777 for hospitalizations; \$236,857 for ED use; \$589,878 for

outpatient use; and \$1,813,240 for prescription use. **CONCLUSIONS:** Asthma is responsible for a substantial economic burden to Medicaid, with hospital use accounting for most of the dollars.

**PRP15****RELATIONSHIP BETWEEN ADHERENCE RATE AND TOTAL MEDICAL AND DRUG COSTS**

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**OBJECTIVES:** Asthma patients' lack of adherence to inhaled corticosteroids (IC) contributes to treatment failure and over \$6.2 billion in associated costs. In disease states such as hypertension, adherence rates  $\geq 80\%$  are related to clinical success. Similar adherence rates for IC in asthma patients have not yet been determined. This study was designed to assess the relationship between IC adherence rate and Total Medical and Drug Costs (TMDC). **METHODS:** Data were from a commercial, integrated pharmacy/medical claims database. Patients ranging from 4 to 55 years with at least 2 claims for an IC, a 120-day benefit history, and a 360-day continuous enrollment were included. Patients were excluded if they were also coded for non-asthma-related pulmonary diseases. Age, gender, and concomitant drug/disease information were collected. The adherence rate was defined as [Total days supply of IC/(last RX date less first RX date + last days supply)]. TMDC included drug, hospital, physician visit and lab costs. The number of Disease Related Events (DRE) was also determined. ANOVA or equivalent tests, along with multiple regression techniques were used to test hypotheses. **RESULTS:** Six hundred forty-three patients were identified. The mean age was  $30.5 \pm 15.8$ , with 43.5% males. We classified 8.5% of patients as 80–99% adherent, 8.2% between 60–79% adherent, 14.9% between 40–59% adherent, and 70.6% of patients were 39% adherent. There was no significant difference in the TMDC among adherence quintiles. The regression demonstrated a statistically significant correlation ( $r = 0.76$ ) between age ( $p < 0.0001$ ), number of medications ( $p < 0.0001$ ), co-morbidities ( $p < 0.0001$ ), use of budesonide inhaler ( $p = 0.0081$ ) or long-acting beta agonists ( $p = 0.0017$ ) against the log of TMDC. There were no items inversely correlated to TMDC. There was no difference in DRE between patients  $< 80\%$  or  $\geq 80\%$  adherent. ( $c^2 = 0.3511$ , 1 d.f.,  $p = 0.5535$ ). **CONCLUSION:** Based on this study, there was not significant linear correlation between adherence to IC and TMDC.